

Concentration Worksheet

Calculate the molarities of the following solutions:

- 1) 2.3 moles of sodium chloride in 0.45 liters of solution.
- 2) 1.2 moles of calcium carbonate in 1.22 liters of solution.
- 3) 120 grams of calcium nitrite in 240 mL of solution.
- 4) 98 grams of sodium hydroxide in 2.2 liters of solution.
- 5) 45 grams of ammonia in 0.75 L of solution.

Calculate the percent by mass and molality of each of the following solution:

(The density of water is 1.0 g/ml)

- 6) 2.3 moles of sodium chloride in 500 g of water.
- 7) 1.2 moles of calcium carbonate in 1.22 liters of water.
- 8) 120 grams of calcium nitrite in 240 g of water.
- 9) 98 grams of sodium hydroxide in 2.2 liters of water.
- 10) 45 grams of ammonia in 0.75 L of water.

How many grams of each solute do you need to make the following aqueous solutions?

11) 2 L of 6 M HCl

12) 1.5 L of 2 M NaOH

13) 0.75 L of 0.25 M Na₂SO₄

14) 45 mL of 0.12 M sodium carbonate

15) 250 g of 0.75 *m* lithium nitrite

16) 56 g of 1.1 *m* iron (II) phosphate

